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ABSTRACT

Empirical research on behavioral marital therapy (BMT) was reviewed and it was concluded that BMT, with its emphasis on working on a strictly behavioral level with married couples, was an effective form of therapy. Six component analysis studies were then examined which showed a general trend in the studies indicating that strictly behavioral interventions could be made more effective as cognitive and affective elements of marital interactions were addressed. Correlational research studies on some of these cognitive and affective elements were reviewed to demonstrate how they affect marital interaction. A review of six correlational studies examining cognitive elements revealed a high degree of irrational beliefs and causal attributions in distressed marriages. A review of six correlational studies examining affective elements illustrated the reciprocal and reactive nature of the affective elements in distressed marital interactions. While affective elements appeared to be more important in predicting marital satisfaction and in predicting the behavior of a spouse than were verbal/cognitive elements, an emphasis on both cognitive and affective elements could help to make BMT more effective. (NB)

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COGNITIVE-BEHAVIORAL MARITAL THERAPY: IN TRANSITION

A Doctoral Research Paper

Presented to

the Faculty of the Rosemead School of Psychology

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Psychology

by

Alan W. Aram

May, 1987

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COGNITIVE BEHAVIORAL MARITAL THERAPY:

IN TRANSITION

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ABSTRACT

COGNITIVE BEHAVIORAL MARITAL THERAPY:

IN TRANSITION

Alan Walter Aram

Cognitive-Behavioral Marital Therapy is a logical outgrowth from Behavioral Marital Therapy. This paper has reviewed research on BMT to achieve three main goals: 1.) to demonstrate that BMT is effective; 2.) to demonstrate that the emphasis on the cognitive and affective elements are appropriate to widen the range of distressed marriages that can be helped; 3.) to review correlational research studies on some of the cognitive and affective elements in marital relationships to indicate how they affect a marital relationship.

COGNITIVE-BEHAVIORAL MARITAL THERAPY: IN TRANSITION

Cognitive-Behavioral Marital Therapy (C-BMT) is a logical outgrowth from Behavioral Marital Therapy (BMT). This paper will review research on BMT to achieve three main goals: 1.) to demonstrate that BMT is effective; 2.) to demonstrate that the emphasis on the cognitive and affective elements are appropriate to widen the range of distressed marriages that can be helped; 3.) to review correlational research studies on some of the cognitive and affective elements in marital relationships to indicate how they affect a marital relationship.

BMT as described in Helping Couples Change (Stuart, 1980) and Marital Therapy (Jacobson and Margolin, 1979) is based on Social Learning Theory.

> Social Learning Theory "resists definition beyond indicating that it assumes a dynamic interaction between what have been regarded as the three fundamentals in human behavior: a physical being with thoughts and feelings, a series of covert and overt behaviors, and a set of environmental factors that set the stage and provide the consequences for these behaviors." (Stuart, 1980, p.43) "The individual is thus seen as both the partial cause and the partial result of an interaction between his or her covert and overt actions and the reaction that these behaviors elicit in others." (Stuart, 1980, p. 44)

Behavioral Marital Therapy is a directive didactic form of therapy that, in its 1979 form, emphasized collaboration between the couple and the therapist. It emphasizes and structures the following components: Assessment of the Dysfunctional Relationship; Increasing the Couple's Positive Exchange Rate; Communication Skills; Problem Solving Strategies; Contingency Contracting and Allocating the Authority to Make Decisions. Since 1979 it has grown to also

encompass the Irrational Beliefs of the couple, affective and verbal reactivity, the attributional processes of the spouses as well as a general emphasis on the affective mode of mental processing.

Behavioral Marital Therapy (BMT) researchers have engaged in ongoing research to demonstrate the degree of its effectiveness. Yet three of the early developers and authors of BMT have recognized the need to broaden the scope of the interventions to increase therapeutic effectiveness. "But there is little doubt that some couples are not successfully treated because BMT, as it is currently practiced, is limited." (Jacobson, 1984) "BMT...can be improved by a more systematic focus on the modification of spouses' cognitive processes." (Jacobson, 1984) "...(A)ffective experience and expression can play an important role in behavioral marital therapy." (Margolin & Weinstein 1982, p. 334). "The trend is from behavioral to cognitive behavioral to cognitive affective behavioral marital therapy because behavioral interventions are incomplete...This is now possible because we have better models of cognitive and affective processing." (Stuart, personal interview, 2/20/87). What is needed is a unifying model which integrates cognitive, affective and behavioral functioning.

Two facts which cause confusion for those reading the research in the field are: 1.) there is not yet a satisfactory theory unifying cognition and affect. 2.) there is not a common vocabulary. This author will attempt

to lessen this confusion by discussing a cognitive behavioral model of marital interaction (Schindler & Vollmer in Halweg and Jacobson, 1984) as well as a model which attempts to integrate cognition and affect (Leventhal, 1979 in Greenburg and Safran, 1984). This author will also attempt to draw parallels between theories by listing synonymous terms when appropriate.

DEFINITION OF TERMS AND CONCEPTUAL OVERVIEW:

There is a lack of consistency in the use of the terms Behavioral Marital Therapy (BMT) and Cognitive-Behavioral Therapy (CBMT). Jacobson, who is one of the most prolific writers in this area still refers to his treatment as BMT even though he directly addresses many cognitive and affective elements. Therefor while C-BMT or CA-BMT (Cognitive Affective Behavioral Marital Therapy) may be a more appropriate term (Stuart, Personal interview, 2/20/87), BMT will used throughout this paper.

Behavioral Marital Therapy (BMT) as used in this paper is best described in Jacobson & Margolin's Marital Therapy (1979). Their description of BMT is the basis for many of the studies evaluating the effectiveness of BMT and for many of the component analysis studies cited later in this paper. There are three general components to BMT: Behavioral Exchange (BE); Communication Training (CT) and Problem Solving (PS). While there is considerable overlap, this author believes that each of these three components function

predominately at a different level and in a different mode of experience. The two levels are: 1.) the behavioral level, including observable behavior and 2.) the intrapsychic level, which includes feelings and thoughts. There are also two modes or ways of processing: 1.) the affective/emotional and 2.) the cognitive/rational.

Any technique actually involves both levels/modes in dynamic interaction, but will function primarily in one of the levels/modes. Behavioral Exchange (BE) functions primarily on the behavioral level, dealing with readily observable overt behavior and in either the cognitive or affective mode. Communication Training and Problem Solving both function primarily on the intrapsychic level but in different modes. Communication Training functions primarily in the affective or emotional mode, while Problem Solving (PS) functions primarily in the cognitive or rational mode. This section of the paper will define each of these three major components of BMT and provide a rationale for the belief of this author that each component functions predominately in a different level and mode.

Behavioral Exchange (BE) emphasizes the increasing of positive behaviors of each spouse towards the other spouse. Positive behaviors are often defined as those behaviors which a spouse marks on the Spouse Observation Checklist (SOC) (Weiss, Hops & Patterson 1973) that he or she would like the other to do more often. Each spouse reads the SOC of the other and develops hypotheses concerning behaviors he

or she can do to increase the daily satisfaction of the other as recorded in the Daily Satisfaction Rating (DSR) (Weiss, Hops & Patterson 1973) of his or her mate. These hypotheses are then confirmed or disconfirmed and if disconfirmed new hypotheses are made and tested. Sometimes this process is done noncontingently, as in Stuart's (1980) Caring Days. Other times the positive behaviors are done contractually; "If you ... then I will ..." as in Quid Pro Quo contract.

Behavioral Exchange (BE) emphasizes the increasing of specific overt positive behaviors by each spouse. While the positive behaviors have a positive affect or valence the main emphasis is on changing overt behavior. In this sense it is predominately behavioral. BE also addresses the affective mode of intrapsychic functioning because each spouse must disclose their overall satisfaction, or happiness in the marriage on a daily basis using the DSR. The spouses specific "likes" are communicated in the SOC. So while the stated emphasis is on behavior, there is significant communication of emotional material. Finally BE addresses a degree of the cognitive/rational mode of intrapsychic functioning when contracts are agreed to because in that process a cognitive evaluation is made by each as they bargain in forming the contract. Because BE focuses predominately at the behavioral level with little direct emphasis placed on changing the internal psychological processes of how the individual spouses make

decisions or come to conclusions, the improvement is likely to be limited. Improvement is likely to be limited to the specific behaviors learned and is not likely to generalize to new situations because there is no change in the concommitant cognitive and affective components. Improvement is also likely to be limited to a short duration of time because the new behavior may be in conflict with some of the concommitant cognitive and affective components; ie: "I'll act more affectionate even though I don't think she deserves it".

Communication Training (CT) is a common element in almost every marital therapy. In BMT Communication Training is taught in a systematic skill acquisition program in which feedback, instructions and behavioral rehearsal are used initially. The therapist provides feedback to the clients about their communication. The feedback is usually descriptive and nonjudgemental; ie. "Bob, you criticized Sue when you said ..." as opposed to "Bob, you are really an inconsiderate brute when you talk to Sue that way". Initially the feedback is given to point out and reinforce positive behaviors instead of negative behaviors. This increases the spouses' feelings of self efficacy and exemplifies the emphasis on positive instead of negative. Later on in CT spouses are encouraged to check out the accuracy of their communication by restating what the other says.

Instructions or coaching/modeling are also used to teach effective communication. The therapist "feeds" each spouse the words and phrases to say until they can say them spontaneously. Initially this "feeding" is done at a high rate, then later as the spouses internalize the rules for effective communication they are "weaned" from direct reliance on the therapist.

Behavioral rehearsal is the practicing subphase of CT. First each spouse is made aware of their own faulty communication patterns and they are taught better communication skills. Then the spouses practice the new effective communication skills under the watchful eye of the therapist. This completes the "weaning" process so that finally the spouses no longer use the exact words of the therapist, but incorporate the newly learned principles learned into their own dialogue.

Jacobson and Margolin (1979) list six targets or subsequent skills for CT: empathy and listening skills; validating; feeling talk; negative feeling expression; positive expressions and assertiveness. All six of these have a strong affective component, but empathy and listening skills offer the clearest statement of this emphasis: "Since empathy implies a direct apprehension of the other's experiences, especially the emotional component of the other's experience, reflecting, as a vehicle for the demonstration of empathy, includes an inference about the emotional state underlying the partner's remark." (Jacobson

& Margolin, 1979, p. 201) (emphasis mine). CT often results in changes in the concommitant cognitive and affective components for each of the spouses as the rules for effective communication are internalized/learned and therefore the changes are more likely to be maintained than are the changes from BE. Another main outcome of CT is affective interchange and the resulting increased feelings of intimacy. Intimacy is a fundamental human need that is associated with marital satisfaction and therefore any activities that meet that need are likely to be highly rewarding and repeated.

Problem Solving (PS) is the third major component of BMT as described in Jacobson and Margolin (1979) and used throughout much of the research reviewed in this paper. Problem solving skills are important to teach because distressed couples often rely on aversive control tactics, especially punishment and negative reinforcement which are highly reciprocal.

Problem solving is taught as a structured interaction with a specific agenda. First the couple is taught to state the problem in behavioral terms. Second, the couple "brainstorms" or lists any and all possible solutions without evaluating them. Third, the couple discusses the logical outcomes of each of the alternatives and agrees on one. Fourth, this agreement is written down. Finally the couple evaluates the outcome at a later date and if it is not acceptable, then they begin the process again. This

process is highly logical and cognitive. Affect is intentionally minimized because it interferes with the rational activities. PS training often results in changes in the concommitant cognitive and affective components because of its highly conceptual nature. A specific strategy is taught and then various examples are worked through until the spouses can each solve new problems with the existing strategy. Because PS involves these changes in the concommitant cognitive and affective components it too, as is CT, is more likely to result in longer lasting changes than BE.

This section has defined the three major components of BMT as described in Jacobson and Margolin's Marital Therapy (1979). These definitions are similar to those used throughout most of the research reviewed. The Behavioral Exchange (BE) component functions on a behavioral level. Changes are not likely to be maintained over a period of time nor are they likely to generalize to different situations because little if any change in the concommitant cognitive and affective components result. The Communication Training (CT) component functions predominantly on the intrapsychic level and in the affective mode. Resulting behavioral changes are more likely to be maintained over time and are more likely to generalize to new situations because changes in the concommitant cognitive and affective components occur. The Problem Solving (PS) component functions predominantly on the intrapsychic level and in the

cognitive mode. Resulting behavioral changes are likely to be maintained over time and are likely to generalize to new situations because changes in the concommitant cognitive and affective components have occurred. Now that we have defined the basic terms that are used in the research reviewed, we will turn our attention to the effectiveness of BMT.

EFFECTIVENESS - OUTCOME STUDIES

GENERAL CONSIDERATIONS:

How effective is Behavioral Marital Therapy, or any therapy for that matter? BMT has led the field in the number and quality of studies that have been completed. The measured effectiveness of any treatment is partially a function of the measurement device used. Behaviorists have a theoretical advantage because they emphasize the importance of behavioral change, which is also easy to measure in objective terms. Also many behaviorists emphasize the importance of empirical validation of their treatment procedures.

Treatment effectiveness can be measured by different methods; one method includes comparisons between the specific treatment and a no-treatment control group. Another method compares different treatment modalities. Such individual studies can be summarized by undertaking a meta-analysis which compares multiple studies. The following four meta-analysis studies were not limited to

marital therapy, but many of the findings apply to marital therapy.

A meta-analysis study done by Shapiro (1982) found that overall less than 10% of the variance between outcomes in treatment effectiveness could be accounted for by the different treatment modalities. Such things as nature of the target problem, measurement methods and instrument design were each greater predictors of the variance. Smith (1980) as well as Berman, Miller and Massman (1984) found that the allegiance of the researcher was a good predictor of the outcome. Shapiro (1982) reviewed three meta-analytic studies and found that overall cognitive behavioral techniques produced between .39 and .68 standard deviations more improvement than the dynamic/humanistic techniques that were compared.

PREVIOUS REVIEW OF THE EFFECTIVENESS OF BMT

Baucom (1986) reviewed 31 studies comparing BMT to waiting list control groups and found: "In summary relative to WL couples, couples receiving BMT show decreases in negative communication assessed in the therapy setting, decreases in reported problem areas and request for behavior change, and increases in overall marital adjustment." (p. 600) While these findings are favorable, there were some methodological shortcomings in operationalizing "improvement" in the studies.

Methodological Problems with Previous Studies:

There have been problems in the operationalization of "improvement" in marital therapy. Most studies on marital therapy have compared only the mean scores of the treatment groups. This provides useful information, but does not help the clinician predict whether or not a specific couple is likely to benefit from BMT or predict the extent of change that can be expected. Improvement has often been operationalized by an increase or decrease in the subjects score on a specific measurement device, without accounting for the measurement error of the device. This is problematic because some of the "improvement" could be an artifact of the error of measurement in the instrument and not true improvement. This is relevant when the comparisons are made within the groups and not when the comparisons are made between groups. Improvement has also been operationalized as the direction of change due to therapy, but whether or not the couple was still distressed was often ignored. The distinction between distressed and nondistressed is arbitrary and usually the mean score of the measurement device is the cut off point. This could be problematic if it is assumed that being "improved" also means no longer being distressed, or if it is assumed that improved implies a large amount of improvement.

AN EXAMPLE OF RESEARCH THAT OVERCOMES THESE METHODOLOGICAL PROBLEMS

With these methodological weaknesses in mind Jacobson (et.al. 1984) reanalyzed the data of 148 couples from four studies. This reanalysis combined a representative group of BMT studies and used a more stringent measure for improvement. The statistical significance was determined by using a statistic called the Reliable Change Index (RC) which was calculated based on the standard error of the measurement. Clinical significance was measured by examining whether or not the couple moved from the "distressed" to the "non-distressed" group of marriages.

The studies were done between the years of 1978 and 1984. One study (Margolin and Weiss, 1978) was an analogue study with only two sessions of treatment, but with genuinely distressed couples. The length of treatment for 85 couples was 15 sessions, 10 sessions for 72 couples and between 12 and 16 sessions for 36 couples. The level of training and experience of the therapists ranged from being graduate students to clinical psychologists with 5 years of experience. Follow-up measures were completed in three of the studies at 6 months (n=122 couples) and 12 months (n= 85). Measurement instruments used included general measures of marital adjustment (Locke-Wallace Marital Adjustment Scale and/or Dyadic Adjustment Scale and/or the Partnership Questionnaire). The couples were all "distressed" in that they were all below the mean of the global measures of

marital adjustment, and many of them were more than one standard deviation below the mean.

The percentage of couples in which one spouse improved according to the stringent standards of the Reliable Change Index (RC) ranged from 40% - 60% with a mean of 54.7%. Deterioration occurred with only 5.4% of the couples. In 36% both spouses improved according to the stringent standards of the RC. "Truly happy couples" were those in which each spouse showed improvement on the RC and where the couple was no longer "distressed". This included 35% of the couples. At the six month follow-up about 60% of the couples maintained their treatment gains with a 47% improvement on the RC. In comparison, there was only 14% improvement in the waiting list control group according to the RC, while 17% of the marriages deteriorated and 70% did not change. In all three studies significant differences were found between the treatment and control groups.

Even with the high standards used in Jacobson (et. al. 1984) BMT was shown to cause improvement in distressed couples. The "improvement" found in this study is far below the 61% rate reported by Gurman and Kniskern (1981), but the difference is largely due to the more stringent standards. Whether or not the standards are too stringent is less important than the previous lack of uniformity in standards. Hopefully, other researchers will adopt this stringent methodology so more accurate comparisons can be made.

BMT has been demonstrated as being effective. The next section will examine component analysis research and will demonstrate that as a greater emphasis is placed on the cognitive and affective elements, BMT becomes increasingly more effective.

COMPONENT ANALYSIS:

Behavioral marital therapy (BMT) originally emphasized working on a strictly behavioral level with marital couples, even though some cognitive and affective elements were addressed indirectly. The previous section demonstrated that this was found to be effective. This section will look at the research on component analysis. It is hypothesized that BMT will be found to be more effective when the cognitive and/or affective elements are addressed more directly. This trend toward addressing the cognitive and affective elements more directly follows the historical development of BMT to Cognitive- Behavioral Marital Therapy (CBMT) to Cognitive- Affective- Behavioral Marital Therapy (CABMT).

Researchers in the field of BMT have created a voluminous body of research, but only a small number of studies pertain to component analysis. These component analysis studies will be organized on the basis of their outcomes: 1.) Two studies supported the hypothesis; 2.) Three studies provided mixed support of the hypothesis or were equivocable; 3.) One study directly compared the cognitive v.s. affective components. No studies were found that clearly disconfirmed the hypothesis.

Studies which support the hypothesis:

Two studies are presented which support the hypothesis that BMT becomes more effective as the cognitive and/or affective elements are addressed more directly.

Margolin and Weiss (1978) compared the effectiveness of nonspecific treatment factors with behavioral (communication training) and behavioral-attitudinal treatments. The behavioral treatment group recieved communication training in which a buzzer that made a raucous sound was sounded if one spouse thought communication was "unhelpful". The buzzer made a pleasant sound as reinforcement when one thought the communication of the other was helpful. The behavioral-attitudinal group used a similar buzzer, but sought to increase the amount of time where both thought the communication was helpful. The behavioral group tried to pinpoint specific positive behaviors from the SOC and each spouse worked independently at increasing his or her own positive behavior in regard to the wishes of the spouse. The attitudinal-behavioral group had to agree together on which behaviors they would increase as a team.

The behavioral-attitudinal group also received some cognitive restructuring training, ie: "the blame doesn't reside solely with one spouse". This cognitive restructuring goal was to help the couples reattribute the source of their marital problems to "bad relationship skills" rather than "my spouse is bad". Thus the main difference between the behavioral and behavioral-attitudinal

group was an emphasis on mutual rather than individual goals and reattribution of the behavior of each spouse.

The behavioral-attitudinal group had more improvement than did the behavioral group on three out of the five measures used. The behavioral attitudinal group scored higher than the behavioral group on the following three measures: Locke-Wallace Marital Adjustment Scale, daily home rating of pleasing behaviors on the SOC, laboratory observation data on the MICS (Hops, et.al. 1972). There were not significant differences between the groups on the Areas of Change Questionnaire or the Adjective Check List. Both of these treatment groups had more improvement in overall marital satisfaction, specific pleasing behaviors and positive communication responses than did the non-specific treatment group. This study indicates that while communication training is helpful the addition of cognitive restructuring makes BMT even more effective.

Hahlweg (et.al. 1982) reports a study comparing BMT with communication training alone and with a wait list control group. The two treatment conditions were further divided into conjoint and conjoint group, with a total of five groups. This study was done in West Germany, included 85 couples and employed highly experienced therapists. Therapy consisted of 15 sessions and there was a follow-up at six and 12 months.

The communication skills training group was similar to that described in O'Leary and Turkewitz (1981) (cited

below). The BMT contained some elements of communication training, but emphasised the problem-solving techniques of specifying, negotiating and contracting. Three of the treatment groups improved more than the fourth. Both BMT conjoint (BMT-C) and BMT conjoint group (BMT-CG) as well as communication training conjoint (CT-C) improved more than the communication training conjoint group (CT-CG) which in turn improved more than the control group (Con). [BMT-C ~ BMT-CG ~ CT-C > CT-CG > Con.] This is highly relevant clinically because though a conjoint group format is often used to teach communication skills, this treatment did not result in more improvement than in the control group with the exception of one out of the seven measures.

In this study BMT and its components are demonstrated as being effective. The total package including both the communication skills with their affective emphasis and the problem solving skills with their more cognitive emphasis resulted in more improvement than the communication training alone (especially when done in a group format) and resulted in much more improvement than the wait list control group.

Studies with Mixed or Equivocable results:

Three studies are presented that report mixed or equivocable results that do not clearly confirm the hypothesis that BMT becomes more effective as the cognitive and affective elements are addressed more directly.

O'Leary and Turkewitz (1981) compared BMT with communication training and with a waiting list control

group. Thirty couples who scored below the mean of 100 on the Locke-Wallace Marital Adjustment Scale (MAS) participated. Twenty-three percent had participated in previous marital therapy. Couples were seen in a groups of 2 for the 10 weeks of treatment.

The treatment of the BMT group consisted of two parts: 1.) the couple learned communication skills training by having each spouse clearly state his desires; 2.) contingency contracts were used where specific rewards and punishments were agreed upon and carried out by the couple. The Communication Training group emphasised clear communication, decreasing destructive verbal exchanges and an increase in positive, open and supportive interactions. The major difference between groups was that in the BMT group communication training was used only to the extent necessary to teach contigency contracting, while the communication training group placed its sole emphasis on communication training.

This study is often cited in the literature as finding no differences between the treatment groups. Overall, there were no differences, but the older couples improved more with the communication training and the younger couples improved more with the BMT. The researchers speculated that this may be due to the fact that older couples had more rigid behavior patterns that would be less likely to change than the younger couples. This is relevant clinically, but further research is needed to confirm this pattern. The

lack of differences between treatment groups may have been due to the contamination between treatments from the overlapping of communication skills training. However, other studies have similar contamination and still find a difference between groups. Both treatment groups improved more than the waiting list control group and maintained their improvement at the four month follow-up period. This again indicates that the communication skills training and total BMT treatments are effective. While this study does not support the hypothesis that BMT becomes increasingly effective as the cognitive and affective elements are addressed, this author believes that the findings are equivocable because of the similarity of the treatments.

Baucom (1982) compared 4 groups: a.) problem-solving/ communications training + quid pro quo contracting b.) problem-solving /communications training only, c.) quid pro quo contracting only, d.) waiting list control group. 72 couples participated in the study and averaged 1 standard deviation below the mean on the MAS (Locke & Wallace, 1959). Each couple participated in 1 1/2 hours of conjoint therapy weekly for 10 weeks.

The three treatment groups improved more than the control group and maintained their improvement at the three month follow-up period. While the authors report that there were no statistically significant differences in the degree of improvement between the treatment groups, the data showed the combined group (a.) improved more than the control group

(d.) on all four measures, while the the partial treatments (b. & c.) improved more than the control group (d.) on three of the four measures. This does indicate a trend towards more improvement or mixed results, associated with the complete treatment, even though it is not statistically significant on all four measures.

Jacobson (et. al., 1985) summarized and expanded upon two previous studies, (Jacobson, 1984 and Jacobson and Follette, 1985) and increased the follow-up to one year. The larger study included 60 couples who participated in either: a.) complete BMT (CO); b.) behavioral exchange (BE) treatment; c.) communication / problem solving (CPT) treatment, or d.) waiting list control (WL) group. Treatment ranged from 12 - 16 sessions. The number of sessions per couple in each treatment group was not reported. The possible differences in average number of treatment sessions between groups could result in differences in the rate of improvement between the treatment groups.

Results at the end of the treatment period indicated that all three treatment conditions were better than the control group on all criterion measures. There were no significant differences among treatment groups. Results at the end of the six month follow-up period indicated that the BE group deteriorated on three of the four measures, while in contrast the CO and CPT groups maintained or continued to improve. Results from the one year follow-up indicated

that overall the deterioration exceeded the continued improvement for the three treatment groups. The three treatment groups were no longer significantly different from each other on the Dyadic Adjustment Scale or the Areas of Change questionairre. However, the couples in the CO group were significantly less likely ($p < .01$) to have either seperated or divorced than couples in the BE or CPT groups. Overall, the treatment groups differed on only one of the three measures, number divorced/ seperated/ married couples, yet in the opinion of this author this one measure is certainly significant. This author believes that this is indicative of a trend or mixed results confirming the hypothesis.

A Study directly comparing cognitive v.s. affective components:

One study compared the more cognitive problem solving training with a more affectively oriented treatment. Johnson and Greenberg (1985) compared problem solving training to an emotionally focused experiential treatment to a waiting list control group. 45 moderately distressed couples (Mean Dyadic Adjustment Scale score of 92) who were highly educated (mean 15 years) participated in eight sessions of treatment. The emotionally focused (EF) group was based on the experiential tradition in psychotherapy which emphasised the role of affect and intrapsychic experiences. The EF treatment also utilized the systemic tradition with an emphasis on communication and the

interaction cycles in the maintainance of problems. This treatment approach is described in greater detail elsewhere (Greenburg and Johnson, 1986).

The results indicated that the Emotionally Focused (EF) group was significantly more improved than the Problem Solving (PS) group which was significantly more improved than the waiting list control group on overall marital adjustment as measured by the Dyadic Adjustment Scale (DAS). Specifically the EF group scored significantly higher than the PS group on the Satisfaction and Cohesion subscales of the DAS and on the Intellectual Intimacy and Conventionality (Idealism) subscales of the Personal Assessment of Intimacy in Relationships Inventory (PAIR). Problem solving training with its largely cognitive emphasis was found effective, but the EF treatment with its emphasis on affect and the reciprocity of spouses behavior was found to be more effective.

The limitations of this study are that the senior author was also one of the therapists and the orientation of the author has been associated with research outcomes (Smith, 1980 & Berman, Miller and Massman, 1984). Replication is in order without the senior author's direct participation. Another limitation of the study is the moderate level of distress and high level of education of the couples. The findings seem clear that the affective emphasis is more effective, but the degree to which these findings can be

generalized to more severely disturbed, less educated couples and to different therapists remains to be seen.

Summarizing these six studies we find that two clearly support the hypthesis that BMT becomes more effective as the cognitive and/or affective elements are addressed more specifically. Three studies provided equivocable or mixed findings. One study indicated that when the cognitive and affective components were directly compared that the affective elements are more important therapeutically than are the cognitive elements.

The meta analysis study done by Shapiro (1982) found that less than 10% of the variance between the results of the different treatment modalities could be accounted for by the differences in treatment. Other factors such as nature of the target problem, measurement methods and instrument design were each greater predictors of the variance. In light of this, it is not surprizing that the differences between the treatment results of BMT and its components are not statistically significant in all of the studies reviewed in this paper.

The general results which found that BMT is more effective than its components alone are not surprising in light of the theoretical position of this paper as mentioned briefly in the Introduction and discussed in greater depth in the last section. Behavioral Exchange directly addressed only the behavioral level interactions of each spouse. It

appears that when the cognitive and affective elements are not directly addressed changes that occur are short lived.

Problem solving training has a general cognitive emphasis and communication skills training a general affective emphasis. When both the cognitive and affective elements are addressed, the improvement appears greater and longer lasting. These cognitive and affective elements in BMT provide each spouse with internal strategies for maintaining the changed behavior. Adding the behavioral elements is effective because it increases the positive behaviors early in the therapy which in turn increases both the positive expectations for the therapy and the feelings of self efficacy for each spouse in the couple.

Finally it is interesting to note the comparison of the affective v.s. the cognitive modes in the Johnson and Greenburg study. It would be premature to state unequivocably that it was more important to address the affective mode than the cognitive mode. The above mentioned methodological concerns with the study and lack of replication studies at this point preclude that assumption. The problem solving - cognitive approach was taken from Jacobson & Margolin (1979) and would probably be considered out of date by those authors. Even these cautions cannot obscure the importance of, if not the superiority of the affective modality in successful treatment of distressed couples.

The next section will examine 12 correlational studies and a theoretical rationale as to how these important cognitive and affective elements of BMT function. These cognitive and affective elements are important because they underlie much of the marital distress.

COGNITIVE ELEMENTS

The previous section reviewed six component analysis studies which indicated that BMT became increasingly effective in treating distressed marital couples when cognitive and affective elements were more specifically addressed. This trend towards addressing the cognitive and affective elements paralleled the historical development of BMT.

This section will describe a cognitive behavioral model of marital interaction. It will also discuss six correlational studies that shed some additional light on the cognitive elements of marital interaction. The research in this section discusses irrational beliefs and causal attributions. While the studies are correlational in design and therfore cannot prove that these cognitive elements cause marital distress or success, one can argue in light of social learning theory that there is likely at least a reciprocal influence process.

Schindler and Vollmer (1984) provide a cognitive behavioral model of marital interaction that has been modified by this author (see figure 1.)

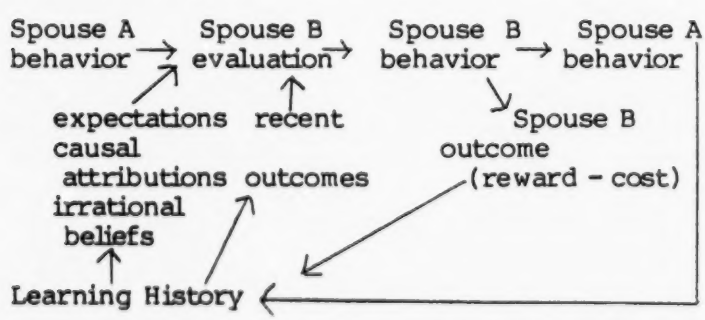

Figure 1.) A cognitive behavioral model of marital interaction.

Spouse B will not simply react directly to spouse A's behavior, but rather Spouse B will act in accord with his/her evaluation of spouse A's behavior. Spouse B evaluates spouse A's behavior in light of spouse B's expectations, causal attributions and possibly irrational beliefs about spouse A. For example: if spouse A emits some positive behavior (buying flowers) for spouse B, and if spouse A attributes that behavior to some external cause (the therapist told him to), then spouse B will not get the positive "credit" for the positive behavior. If on the other hand spouse A does something negative (studies over Easter vacation) and spouse B attributes that to spouse A himself instead of to some external cause (the paper is due shortly), then spouse A is likely to erroneously get a negative credit for his behavior. A similar example can be given for irrational beliefs. If spouse B has the irrational belief that spouse A should know what he is thinking without his saying it (mindreading is expected), then when spouse A violates an unspoken wish of spouse B (hug me when I'm mad at you), spouse A may falsely earn the wrath of spouse B. These two processes are also detrimental because one spouse is often unaware of what he/she has done to offend the other. After a number of repetitions of this process it becomes automatic and the spouses no longer are aware of their actual evaluations, but seemingly "just respond".

There are four studies co-authored by Norman Epstein that are pertinent to the presence of irrational beliefs in marriage and two co-authored by Jacobson pertinent to causal attributions.

Irrational Beliefs:

Irrational or Unrealistic beliefs are those unrealistic standards that a person may expect himself or others to live up to. Epstein (et. al. 1979) measured the irrational beliefs of 54 undergraduate volunteers by using the Jones's Irrational Beliefs Test (Jones, 1968). Subjects were then shown eight 30 second video tapes of actors portraying young couples in an interview setting discussing such topics as the decision to have children, religious participation, decision to move, amount of time to be spent with relatives. The actors were trained to convey minimal emotion. Subjects then reported the feelings that they attributed to each spouse in the videotape as well as perceived affectional quality of the relationship and the strength of the relationship.

"Spouses" that were viewed as agreeing more on the topics were also viewed as having more positive feelings towards each other than were disagreeing couples. More importantly there was a significant ($p < .005$) interaction between irrational beliefs and agreement/disagreement. Subjects who were high in irrational beliefs rated the spouses feelings as significantly less positive than spouses who were low in irrational beliefs. The presence of

irrational beliefs was associated with a more negative or pessimistic perception of others. To the extent that this finding also applies to marital couples, then a spouse with more irrational beliefs would be more pessimistic in evaluating the behavior of the other spouse.

Epstein and Eidelson (1981 and 1980) examined the overall irrational beliefs of 47 couples in marital therapy as well as the following subtest scales indicating various beliefs about marriage and marital therapy: Estimation of Chance for Improvement in Therapy, Desire to Improve v.s. Terminate the Relationship, Preference for Conjoint v.s. Individual Therapy and Overall Marital Satisfaction.

The distress of the couples is indicated by their having recently begun marital therapy and their average score of 86.2 (range 48 - 120) on the Locke-Wallace Marital Adjustment Scale (MAS Locke & Wallace, 1959). Couples were given the MAS, the Jones's Irrational Beliefs Test (IBT Jones, 1968), the Relationship Beliefs Inventory (RBI Eidelson & Epstein, 1982) and a Therapy Goals and Expectations Questionairre. Eidelson and Epstein (1982) describe the development and validation of the RBI, which is a test of irrational beliefs about intimate relationships.

Demand for Approval and High Self-Expectations (IBT) were each negatively correlated with marital satisfaction. Partners Cannot Change (IBT) was negatively correlated with the estimation of Chance for Improvement. Both Partners Cannot Change and Mindreading is Expected (IBT) were

negatively correlated with the Desire to Improve v.s Terminate the Relationship. Demand for Approval, High Self-Expectations, Disagreement is Destructive and Mindreading is Expected (IBT) were all significantly negatively correlated ($p < .05$) with the partner's MAS scores. High Irrational Beliefs scores were also negatively associated with the preference for conjoint as opposed to individual therapy.

Caution must be exercised in making inferences about causal direction from these correlational studies. The irrational beliefs may cause a lack of marital satisfaction or the negative marital interactions may increase irrational beliefs, or some third intervening variable may account for both. Further research will help clarify this question. However, to the extent to which one adheres to the social learning theory concept of reciprocal determinism, that is that beliefs cause behavior and behavioral experiences in turn cause beliefs, then therapeutic work on the irrational beliefs would have a direct or indirect effect on increasing marital satisfaction.

Casual Attributions:

All people have a need to make the world in which they live and interact meet a certain level of predictability. One of the methods of establishing such predictability is to develop causal attributions; to have a set of reasons for "why" things happen as they do. Having an existing set of causal attributions makes life more efficient because one

doesn't have to stop and ask "why?" each time something happens. Causal attributions tend to oversimplify the world and one who is highly dependent on causal attributions to order his world tends not to change in response to changes in his world. When this happens causal attributions can become maladaptive and cause distress in a marital relationship.

Jacobson (et. al. 1985) compared the attributional processes of distressed and nondistressed couples. Each spouse of 49 nondistressed couples scored above 100 on the Dyadic Adjustment Scale (DAS Spanier, 1976), with an average score of 118. At least one of the spouses in each of the 23 distressed couples scored below 100 on the DAS with an average score of 87. The DAS scores were significantly different for the two groups ($p < .001$). The internal v.s. external attributions of each spouse made by the other was measured by using a Postdiscussion Questionairre that was developed by the authors. Internal attributions are those where the spouse perceives the cause of the behavior of the other person as being a result of personality variables. External attributions are those where the spouse perceives the cause of the behavior of the other person as being a result of external variables. The Inventory of Marital Conflicts (IMC) was used to generate conflict tasks for each couple.

The spouses were separated after completing the DAS and IMC. One spouse, spouse A, was given either positive

instructions "...be as positive and cooperative as you are at your best, but not abnormally positive...", or negative instructions "...be as negative and uncooperative as you are at your worst, but not abnormally negative...". They were then brought together and asked to discuss and reach agreement on an item from the IMC "as if it were (their) own". The spouses were then separated and spouse B was given the postdiscussion questionairre. Manipulation checks indicated that the deception was successful.

The results showed that distressed spouses were particularly inclined toward making internal attributions when the behavior of their partner was negative and nondistressed spouses were particularly inclined toward making internal attributions when the behavior of their partner was positive ($p < .05$).

The direction of causality can not be determined from this experiment. It is not known whether the low level of marital satisfaction of the distressed couples causes internal attributions or whether internal attributions cause distress. To the extent that the attributions cause the distress or that there is a reciprocal causality, then the cognitive restructuring techniques described by Jacobson (1984) and Epstein (1982) are therapeutically appropriate.

Holzworth/Monroe and Jacobson (1985) studied the causal attributions made about one another in married couples in a more specific manner. Attributional activity was defined as either the process of asking "Why?" questions (Why did he

have to study all day Saturday?) or the outcome of such a process. (He had to study all day to get his PsyD paper done). Attributional thoughts were further divided into those which were "distress maintaining" or "relationship enhancing". The authors make an unsupported value judgement when they state that distress maintaining attributions are those where the behavior is due to the "personality traits, intentional or with negative intent, voluntary, stable or global" of their partner. In contrast the authors describe "relationship enhancing" attributions as "...involuntary...". This author is concerned with equating "voluntary" actions with making distress maintaining attributions. Certainly the "ownership" of our behavior can be pathological when it is over emphasized; but to negate "ownership" is to minimize responsibility. The study could be strengthened by factoring out this one aspect of distress maintaining attributions.

The results showed that distressed couples used more distress maintaining attributions than their nondistressed counterparts. Distressed husbands engaged in more attributional thoughts than did their nondistressed counterparts, but distressed and nondistressed wives did not differ. The results suggest that the attributional processes of distressed husbands are more likely to need therapeutic work than those of either distressed or nondistressed wives. Behaviors that were perceived as being

more negative by the receiving spouse elicited more attributional activity than did positive behavior.

The direction of causality between distress and attributional activity is not indicated by this study. Again, assuming that they are at least reciprocally determined these studies demonstrate their importance in maintaining and escalating marital distress. Thus treatment components which are directed at changing destructive beliefs and attributions would enhance treatment effectiveness.

Summary:

This section has addressed the research on the cognitive elements in BMT. It has discussed how irrational beliefs and attributional processes can be correlated with marital distress or nondistress.

The presence of irrational beliefs was found to be associated with marital distress and a pessimistic perception of others. Demand for Approval and High Self-Expectations (IBT) were each negatively correlated with marital satisfaction. Partners Cannot Change (IBT) was negatively correlated with the estimation of Chance for Improvement. Both Partners Cannot Change and Mindreading is Expected (IBT) were negatively correlated with the Desire to Improve v.s Terminate the Relationship. Demand for Approval, High Self-Expectations, Disagreement is Destructive and Mindreading is Expected (IBT) were all significantly negatively correlated ($p < .05$) with the

partner's MAS scores. High Irrational Beliefs scores were also negatively associated with the preference for conjoint as opposed to individual therapy.

The presence of internal causal attributions (ie: he studied all day because he doesn't want to be home and that's just the way he is) was found to be associated with marital distress. The presence of external causal attributions (ie: he studied all day because he has a heavy class load) was associated with marital happiness. Distress maintaining attributions (ie: asking "why?") was associated with marital distress in husbands, but not in wives.

The research to date does not indicate the direction of causality between these cognitive elements and marital distress or happiness. If reciprocal causality is assumed then it would be appropriate to incorporate treatment strategies into BMT for these cognitive elements.

The cognitive elements of marital interaction need to be addressed for two reasons: 1.) Concurrent treatment of maladaptive behavior and maladaptive cognitions interrupts the cycle of maladaptive interaction on two levels; 2.) Changing behavior alone does not guarantee that cognitive changes will occur quickly or automatically.

The next section will address the correlational research on the affective elements of marital interaction.

AFFECTIVE ELEMENTS:

This section will review six correlational studies that shed some light on the affective elements of marital interaction. While the studies are correlational in design and therefor cannot prove that these affective elements cause marital distress or success one can assume that there is likely to be some reciprocal causality.

The affective elements of marital interaction are highly reactive and reciprocal. Affective reactivity is the tendency for the behavior of one spouse to vary in accordance with the recent behavior of the other spouse. Affective reciprocity refers to causation; ie: that spouse A's affect causes spouse B's affect, as will be shown later in this section. Affective reciprocity is a better predictor of marital distress than the causal attributions of the spouses which are cognitive in origin. It is therefor assumed that the affective elements are more important in determining behavior than the causal attributions. Greenburg and Safran's (1985) model for integrating affect and cognition will be used to explain why affect is more important than cognitions in understanding marital conflict.

Jacobson, et.al.(1982) studied the reactivity of positive and negative behavior in distressed and nondistressed married couples. They defined reactivity as the "tendency for marital satisfaction to vary according to the frequency of recently occurring positive or negative events" (p. 706). The authors compared the daily rating of

marital satisfaction (DSR Jacobson et. al. 1982) by each spouse with the frequency of positive and negative behaviors of one spouse as well as the affective reaction to the behavior of the other spouse. The behavior of each spouse was measured by having him or her complete the 409 items of the well established Spouse Observation Checklist (SOC Patterson, 1976).

The results showed a difference between the number of positive and negative behaviors in distressed and nondistressed couples. More importantly the study found that while the daily satisfaction of distressed and nondistressed couples tended to be associated with his or her perception of the positive behavior of the other spouse that day, this trend was significantly stronger ($p < .05$) for distressed than nondistressed couples. Distressed couples were more reactive to the immediate, that is, the daily behavior of his or her spouse than were the nondistressed couples. This trend was significant for positive behavior ($p < .05$), but more so for neutral behavior ($p < .01$) and even stronger for negative behavior ($p < .001$). Hence, distressed couples react more strongly to the negative than the positive behavior of the spouse.

Fincham and O'Leary (1983) did a study comparing the relative importance of the cognitive elements of causal attributions, in each spouse, with the the importance of affective responses in each spouse in determining subsequent behavior. They studied 32 married couples, 16 of which were

distressed and 16 of which were nondistressed. The distressed couples were seeking marital therapy and had a mean score on the Marital Adjustment Test (MAS Locke & Wallace, 1959) of 76.1 for husbands and 65.4 for wives. The nondistressed couples were not seeking marital therapy and neither spouse had a score below 110 on the Marital Adjustment Scale. The two MAS scores of the two groups were significantly different ($p < .001$). There were no significant differences between the couples on age, years married, education, number of children or family income.

The couples were asked to list six hypothetical situations describing positive behavior of the spouse and six describing negative behavior of the spouse. For each action portrayed each spouse was asked to name the major cause for the spouses behavior and rate it as stable, global or controllable by the spouse doing the behavior. They also stated two feelings that they would experience in relation to the behavior of the spouse and rated those feelings from 1 - 7, 1 being positive and 7 being negative. Finally they were to state their behavioral reaction to the spouses behavior.

Fincham and O'Leary (1983) found that nondistressed couples saw the causes of the spouses positive actions as being more global and more controllable by the spouses doing the behavior than did their distressed counterparts ($p < .001$). For negative acts the distressed couples saw the cause named by the spouse as more global than did the

Gottman (1980) compared 19 distressed couples with 19 nondistressed couples. The distressed couples were seeking marital therapy and scored significantly lower ($p < .001$) on the Locke-Williamson Marital Relationship Inventory (MRI: Burgess, Locke and Thomas, 1971) than did the nondistressed couples.

Conflict was created artificially in the couples with the help of a coach by having one spouse improvise conflictual behavior, which was selected from a pool of conflictual topics. The highest conflict task was the situation where one spouse requested sex and the other spouse did not want to have sex. The lowest conflict task was the situation where the spouses chose between various fun activities. The couple was then videotaped in their interactions and the videotaped interactions were coded. Each utterance received a code of either positive, neutral or negative affect based first on the facial expression, then voice, then body language of the spouse. The author provides a detailed explanation of the coding system and reports satisfactory interrater reliabilities.

The results indicated that consistency was highest for negative rather than positive affect; that is if spouse A is angry, spouse B is more likely to be angry than if the spouse A were to be happy. Reciprocity was also greater with negative than positive affect; that is if one spouse is angry the other is more likely to become angry than if one spouse is happy.

This study provides relevant clinical information. Again the importance of affective reciprocity of negative behavior is shown. The study also provides another measure of affect, this time nonverbal behavior is reported by an independent observer as opposed to the use of a self report test alone.

Levenson and Gottman (1983) provided yet another measure of affect and demonstrate affective reciprocity on the physiological level, which they refer to as physiological linkage. Thirty married couples were studied in a naturalistic setting. Half of the couples were "distressed" in that they responded to a newspaper ad requesting "couples having difficulty solving marital problems". The other half were "nondistressed" in that they responded to a newspaper ad requesting "couples needed for research project studying marriage".

Couples who had been apart for at least eight hours came to the laboratory and "engaged in their typical conversation about the events of the day as if they were at home alone" for 15 minutes, as a low conflict baseline period. They then separately completed 4 questionairres to assess their marital satisfaction and to determine conflictual topics. The couple was then asked to discuss for 15 minutes one of the conflictual topics with the goal of reaching a solution. Three to five days later they returned, viewed the video tape of the discussion and rated their affect about the discussion.

Four measures of physiological responses associated with affect were used during the two 15 minute segments: heart rate measured by interbeat interval (IBI); pulse transmission time to the finger (PTT); skin conductance level (SCL) and general somatic activity (ACT). Later the subjects watched a video tape of their interaction and rated their affect. A dial was used that could be turned between 0 degrees = very negative to 90 degress = neutral to 180 degress = very positive with increments in between. Data was taken from this instrument on 10 second intervals.

Levenson and Gottman found that physiological linkage, or affective reciprocity determined by physiological measures, accounted for 60% of the variance in marital satisfaction during the problem-solving segment. This was higher than for the low conflict "how's your day been" segment. This is significant in light of the fact that questionnaires typically account for less than 10% of the variance in marital satisfaction and observation of nonverbal affect (Gottman, 1979) only account for 25% of this variance.

The authors found that distressed wives reported more negative affect than their husbands, but distressed husbands did not report more negative affect than their nondistressed counterparts. They also found that wives reciprocated more of the husbands negative affect than husbands reciprocated of their wives negative affect. That is, when husbands had negative affect, it was followed by more negative affect in

their wives but when the wives had negative affect it was not followed by as much negative affect by the husband as that displayed by the wife. The husbands were also less affectively responsive than wives.

In this section we have examined some of the important affective elements in a marriage relationship. We have found that distressed couples are "locked into" responding to the negative and more recent behavior of their spouses than are nondistressed couples. While causal attributions are important in predicting behavioral responses in a spouse, affective reciprocity was more important. Nonverbal /affective behavior was a better predictor of marital distress than verbal /cognitive behavior. Consistency and reciprocity between spouses was greater with negative than positive affect. Finally, physiological linkage, or the physiological measurements of affect could account for more of the variance in marital satisfaction than either nonverbal or verbal measurements. Husbands were generally less responsive affectively and wives responded more strongly to their husbands negative affect.

Summarizing these findings we find that affective elements are more important in predicting marital satisfaction and in predicting the behavior in a spouse than are verbal /cognitive elements. Affect can be measured by self report, observation of nonverbal /body language or physiological measures.

Greenburg and Safran (1985) attempt to build a theory which integrates cognition and affect. Their work is based on Leventhal's (1979) model. The authors conceptualize emotion as a product of a particular type of information-processing activity, which takes place at an automatic, preattentive level. "Emotional experience is not the product of a conscious inferential procress, but rather a preattentive, synthetic process through which emotion is constructed from component elements" (Greenburg and Safran, 1985, p. 566). Emotional experience then is sythesized from its components before it reaches consciousness. The elements from which emotion is synthesized are: a.) facial muscle movements, b.) emotional memories (schema) associated with these facial muscle movements; c.) a conceptual system that stores rules and beliefs about emotional experience. This conceptual system contains the volitions and logical cognitive processes and is where consciousness begins. In summary then, the model suggests that emotions are constructed before conceptual cognitive activity takes place. They can be influenced by this later cognitive activity because of a feedback loop, but are largely formulated before the cognitive processes begin.

This explains why affective reciprocity is so important, because affect starts to form before conceptual cognitive activity takes place. In marital interaction, particularly negative marital interaction, the negative affect of spouse A may cause spouse B to have negative

affect even before spouse B can describe in words what is happening (cognition). Then the negative affect of spouse B in turn causes spouse A to have more negative affect, even before spouse A can describe in words what is happening (cognition). This may explain some of why Johnson and Greenburg's study found the more cognitive problem solving techniques were less effective than the more affective techniques of the emotionally focused group. By the time spousal negative interaction reaches the cognitive stage, it has already influenced the spouses to reciprocate negatively. Breaking the chain of negative interactions at an earlier stage is more effective than at a later stage.

SUMMARY:

This paper has reviewed empirical research for each of its three main goals.

1.) BMT has been demonstrated as being more effective in treating distressed marital couples than participation in a waiting list control group. A previous review of the literature was cited. Some of the methodological problems associated with this type of research were discussed and an example of a research study that avoided this methodological problems was cited. These methodological problems involved the operationalization of "improvement".

2.) Six component analysis studies were examined. It was shown that there was a general trend in the studies indicating that strictly behavioral interventions can be

made more effective as the cognitive and also the affective elements of marital interaction are addressed. Two studies clearly supported this trend. Three studies were equivocable or had mixed results. One study compared marital therapy that emphasized the affective elements with the more cognitively oriented elements and found that when only one area is addressed the affective elements are more important than the cognitive elements.

A Meta-analysis study was cited which indicated that less than 10% of the variance between treatment groups could be accounted for by the differences in treatment. In light of this finding it is not surprizing that the component analysis studies did not consistently find differences between the treatment groups.

3.) Six correlational studies examining the cognitive elements of marital interactions were reviewed. The presence of a high degree of irrational beliefs and causal attributions in distressed marriages was found. Causality was not established by these correlational studies. This author assumed on the basis of Social Learning Theory that there was probably at least a reciprocal causality functioning between irrational beliefs and causal attributions and marital distress. A cognitive behavioral model of marital interaction was cited to indicate how irrational beliefs and causal attributions affect marital interaction.

Six correlational studies examining the affective elements of marital interactions were reviewed. The highly reciprocal and reactive nature of the affective elements in distressed marital interactions were discussed. The greater importance of the affective elements when compared to the cognitive elements of marital interaction was discussed. One theory explaining the integration of cognition and affect was discussed as a means of understanding why affective elements appear to be of greater importance than are cognitive elements in marital interactions.

In conclusion this author finds that there is empirical evidence supporting each of the following: 1.) BMT is effective in the treatment of distressed marital couples; 2.) the emphasis on the cognitive as well as the affective elements is appropriate in making BMT more effective; 3.) how these cognitive and affective elements affect marital interaction.

APPENDIX A: SOURCES for TREATMENT

The treatment of the cognitive and affective elements is beyond the scope of this paper, but treatment has been described in:

Cognitive Therapy with Couples (Epstein, 1982);

Cognitive Processes in Intimate Conflict (Doherty, 1981);

Cognitive Behavioral Marital Therapy (Bussod & Jacobson, 1983);

The Modification of Cognitive Processes in BMT: Integrating Cognitive and Behavioral Intervention Strategies (Jacobson, in Hahlweg and Jacobson, 1984); Cognitive and Strategic Interventions in BMT, (Weiss, in Hahlweg and Jacobson, 1984).

Treatment for controlling the escalation of anger (though not specifically for couples) has been described in: Stress Inoculation Training (Meichenbaum, 1985)

Stress Inoculation Therapy for Anger Control, (Novaco, 1983).

Emotionally Focused Couples Therapy, Greenburg and Johnson, in Jacobson and Gurman, 1986

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